

## ABSTRACT OF THE DISCLOSURE

An electronic ballast for driving a gas discharge lamp includes a rectifier, a valley-fill circuit, an inverter having first and second series-connected controllably conductive switches having complementary duty cycles, a control circuit  
5 for controlling the controllably conductive switches, and an independent cat ear power supply to provide power to the ballast control circuits. The result is a ballast having substantially improved power factor, THD, and current crest factor. In a preferred embodiment, the valley-fill circuit includes an energy storage device that stores energy in response to a controllably conductive switch. In an especially  
10 preferred embodiment, the controllably conductive switch of the valley-fill circuit is also one of the switches of the inverter.

09897848-052201